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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,874	01/25/2002	John M. Ondov	MR2833-13	8573

4586 7590 05/21/2003

ROSENBERG, KLEIN & LEE
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EXAMINER

POLITZER, JAY L

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/054,874

Applicant(s)

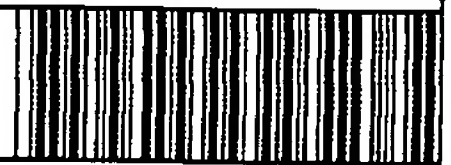
Ondov et al

Examiner

Jay Politzer

Art Unit

2856



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 28, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Serial Number: 107054,874

Aft Unit: 2856

Title: SYSTEM AND METHOD FOR COLLECTING SAMPLES OF
ATMOSPHERIC AEROSOL PARTICLES FOR NEAR REAL TIME
ANALYSIS

Filed: 1/25/02

Inventor(s): Ondov et al

Attorney(s): Rosenberg

DETAILED ACTION

REJECTIONS OVER PRIOR ART UNDER 35 U.S.C. § 103:

1. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

2. Claims 1-15 and 17-22 are rejected under 35 U.S.C. § 103 as being unpatentable over Liu et al, hereinafter Liu, in view of Lee et al, hereinafter ~~Liu~~ LEE.

Regarding Claims 1, 3-5 and 20; Liu teaches a particle concentrator consisting of a coagulation chamber, 20, and spray heads, 26, and particle growth chamber, 32, with steam injection, 34, and a particle removal device, 42, that can be an impactor, Col 4, Li 50, and a virtual impactor, 133. Other than counting, in Fig

4, Liu fails to teach multi-element analysis. Lee teaches multi-element analysis in Fig 5-8. It would have been obvious to one of ordinary skill in the art at the time of the invention to analyze the particles to conform with EPA requirements.

Regarding Claims 2, 18 and 21-22; Liu does on-line analysis. It would have been obvious to one of ordinary skill in the art at the time of the invention to collect fractions in vials to send out for more detailed analysis. In this batch mode, Liu does not state the batch sequencing time. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose the batch sequencing time to optimize performance of the entire system.

Regarding Claims 6-8, 12 and 14-15; Liu fails to state flow-rates. It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the flow-rate to optimize the system.

Regarding Claim 9; Liu controls temperature at Col 5, Li 23-60, but does not depict a heater. It is obvious to use a heater to generate steam and to use cooling means to control the temperature.

Regarding Claims 10-11; Liu teaches a heat exchanger for cooling at Col 6, Li 12-24, but fails to teach the wall temperature. It would have been obvious to one of ordinary skill in the art at the time of the invention to set the wall temperature to optimize the economics of the device.

Regarding Claim 13; this is the obvious function of a virtual impactor.

Regarding Claim 17; see Liu, Fig 4.

Regarding Claim 19; Liu does not teach a residence time. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a residence time to optimize overall system performance.

3. Claims 16 and 23 are rejected under 35 U.S.C. § 103 as being unpatentable over Liu/Lee as applied to claims 1 and 20, above, in view of Denton et al, hereinafter Denton.

Regarding Claims 16 and 23; Liu fails to teach a graphite furnace atomic absorption analyzer. Denton teaches a graphite furnace atomic absorption analyzer at Col 1, Li 11-17. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a graphite furnace atomic absorption

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analyzer because Denton teaches that this is a useful multi-element analyzer that can analyze many elements at one time.

DESCRIPTION OF UNAPPLIED ART:

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because it teaches other aspects of the claimed invention.

INQUIRIES:

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Jay L. Politzer whose telephone number is (703) 305-4930 and whose facsimile number is (703) 308-7382
6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Hezron E. Williams, can be reached at (703) 305-4705.
7. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4900.

jlp 5/6/03

72P

Hezron E. Williams
HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800